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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,700	10/17/2001	Shinya Matsuda	15162/04130	7327

909 7590 12/15/2005

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EXAMINER	
WHIPKEY, JASON T	
ART UNIT	**PAPER NUMBER**
2612	

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/981,700	MATSUDA ET AL.	
	Examiner	Art Unit	
	Jason T. Whipkey	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 15, 2005, has been entered.

Specification

2. The amendment to the abstract is approved and the corresponding objection is withdrawn.

Response to Arguments

3. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Matsuda (U.S. Patent No. 6,891,643).

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding **claim 1**, Matsuda discloses a method for shooting an original by an image shooting apparatus having a photoelectrically converting device (area sensor 20 in Figure 1) and a scanning mechanism (moving mechanism 30) disposed from a support (support shaft 12) adapted to establish a reference position (the center O of the table 10; see column 5, lines 42-44) of the scanning mechanism relative to the original, said method comprising the steps of:

directing one by one split images of the original (sections A-D; see column 4, lines 11-24) including overlapping areas (see column 4, line 64,

through column 5, line 3) to the photoelectrically converting device by operations of the scanning mechanism (see column 5, lines 13-27);

shooting the directed split images by the photoelectrically converting device (see *id.*);

detecting a degree of the operation of the scanning mechanism every directing by the scanning mechanism (performed by position sensor 33; see column 3, lines 28-42);

extracting an effective image from each of the split images based on the detected degree (see column 4, line 64, through column 5, line 12); and

connecting the extracted effective images in order to complete an image of the original (see *id.*),

wherein said operations of the scanning mechanism move an image forming portion so as to change the position of the image forming portion relative to the photoelectrically converting device (see column 3, lines 23-27).

Regarding **claim 2**, Matsuda further teaches:

the operation of the scanning mechanism for directing one by one the split images to the photoelectrically converting device is moving an optical system disposed between the photoelectrically converting device and the original (see Figure 3 and column 3, lines 23-27).

Regarding **claim 3**, Matsuda further discloses:

the scanning mechanism is stopped at a position where one of the split images is directed to the photoelectrically converting device and the split image is shot by the photoelectrically converting device (see column 4, lines 17-24).

Regarding **claim 4**, Matsuda further discloses:

the scanning mechanism is driven so as to direct a different split image of the original to the photoelectrically converting device every image shooting (see *id.*).

Regarding **claim 5**, Matsuda discloses a method for connecting split images of an original (the document placed on table 10; see Figure 1 and column 5, lines 31-34) to obtain an image of the entire original, said method comprising the steps of:

placing the original in a reference position such that the original has a predetermined location and orientation relative to an image shooting device (area sensor 20 in Figure 1; see column 5, lines 31-44);

obtaining split images of the original one by one by an operation to change which part of the original is directed to the image shooting device (see column 5, lines 13-27);

detecting a degree of said operation (performed by position sensor 33; see column 3, lines 28-42); and

connecting the split images in positions in the split images based on the detected degree (see column 4, line 64, through column 5, line 12),

wherein the operation to change which part of the original is directed to the image shooting device comprises moving an image forming portion so as to

change the position of the image forming portion relative to the image shooting device (see column 3, lines 23-27).

Regarding **claim 6**, Matsuda further teaches:

the obtained split images each include an overlapping area (see column 11, lines 62-64), and the split images are connected at connection points for which an area marked off from the overlapping area is searched based on the detected degree of operation (see column 4, line 64, through column 5, line 12).

Regarding **claim 7**, Matsuda further teaches:

the step of calculating a shift between split images based on the detected degree of operation is further included, and the split images are connected together based on the calculated shift (see *id.*).

Regarding **claim 8**, Matsuda further teaches:

the image of the entire original comprises the split images arranged in longitudinal and lateral directions (see Figure 3).

As for **claim 9**, Matsuda discloses an image shooting apparatus, comprising:

an image shooting device (area sensor 20 in Figure 1) which shoots an optical image of an original (the document placed on table 10; see Figure 1 and column 5, lines 31-34);

a directing member (imaging lens 21) which directs split images of the optical image (sections A-D) of the original to the image shooting apparatus (see column 4, lines 11-24);

a registration member (table 10) for providing a reference position and orientation of the original relative to the directing member (see column 3, lines 23-27);

a mechanism (moving mechanism 30) which, in order to scan the entire original, changes which part of the original is directed to the image shooting apparatus by moving at least the directing member relative to the image shooting device (see column 3, lines 23-27));

a detector (position sensor 33) which detects, every time the mechanism moves the directing member, a degree of the moving (see column 3, lines 28-42); and

a processor (the control circuit in main unit 111) which connects the split images based on the detected degree of the moving to thereby complete an image of the entire original (see column 4, line 64, through column 5, line 12).

Regarding **claim 10**, Matsuda further teaches:

the directing member includes a lens system that forms the split images on the image shooting device (see column 4, lines 11-24), and

the mechanism moves the lens system to form the split images on the image shooting device (see *id.*).

Regarding **claim 11**, Matsuda further teaches:

a resolution of the detection of the degree of the moving is lower than a resolution of image shooting (the optical system is only stopped at discrete

positions equal to the number of sections captured; see column 4, lines 11-24), and

the processor performs the steps of:

searching an area defined in a second split image based on the degree of the moving for a second point present in the second split image which second point corresponds to a first point present in a first split image (see column 4, line 64, through column 5, line 12); and

connecting the first split image and the second split image together so that the first point and the corresponding second point coincide with each other (see *id.*).

Regarding **claims 12, 15, and 18**, Matsuda discloses:

said scanning mechanism moves the image forming portion in a direction perpendicular to an optical axis of the image forming portion (see column 5, lines 13-16).

Regarding **claims 13, 16, and 19**, Matsuda discloses:

a locus of movement of the image forming portion is circular (see column 3, lines 43-67).

Regarding **claims 14, 17, and 20**, Matsuda discloses:

motion of the image forming portion corresponds to the base of a cone having an apex at the photoelectrically converting device (see Figure 3).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Whipkey, whose telephone number is (571) 272-7321. The examiner can normally be reached Monday through Friday from 9:00 A.M. to 5:30 P.M. eastern daylight time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc-Yen Vu, can be reached at (571) 272-7320. The fax phone number for the organization where this application is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JTW

JTW
December 9, 2005

NGOC-YEN VU
PRIMARY EXAMINER